

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original) An apparatus having telescopic arms for transfer of loads, comprising:

a first telescopic arm exhibiting a lower portion which is rotatably constrained about a first horizontal hinge axis arranged on a support base associated to a frame of a vehicle;

a first motor for rotating the first telescopic arm into a plurality of positions comprised between a lower horizontal position and a raised position of maximum inclination with respect to a horizontal position;

a second telescopic arm associated to an upper portion of the first telescopic arm;

a terminal load support group for a load, which terminal load support group is mounted on a front end of the second telescopic arm;

wherein the upper portion of the first telescopic arm is aligned with a longitudinal axis of the first telescopic arm and the second telescopic arm is rotatably constrained to the upper portion about a second horizontal hinge axis which is parallel to the first hinge axis;

and wherein it comprises a second motor for rotating the second telescopic arm about the second horizontal hinge axis.

2. (original) The apparatus of claim 1, wherein the second motor rotates the second telescopic arm into operative positions comprised between a first extreme position, in which the second telescopic arm is aligned with the first telescopic arm and a second extreme position in which the second telescopic arm is angled transversally with respect to the first telescopic arm.

3. (original) The apparatus of claim 1, wherein the terminal load support group of the load is rotatably constrained to the front end of the second telescopic arm about a third horizontal hinge axis which is parallel to the first hinge axis and to the second hinge axis, and characterised in that it comprises a third motor for rotating the support group about the third horizontal hinge axis.

4. (original) The apparatus of claim 3, wherein it comprises at least a first sensor for detecting angular displacements, associated to the first telescopic arm, at least a second sensor of angular displacements associated to the second telescopic arm, at least a third sensor of angular displacements,

associated to the terminal load support group, and an electronic control unit for processing the data arriving from the first, second and third sensors and for emitting command signals at least to the third motor in order to maintain a constant angle for the load support group with respect to ground level when an inclination of the first telescopic arm and the second telescopic arm is varied.

5. (original) The apparatus of claim 3, wherein the first, second and third motors comprise at least one hydraulic actuator for each hinge axis.

6. (original) The apparatus of claim 1, wherein the support base is rotatable with respect to the frame of the vehicle about a vertical rotation axis.

7. (new) An apparatus having telescopic arms for transfer of loads, comprising:

a first telescopic arm with a lower portion rotatably constrained about a first horizontal hinge axis arranged on a support base associated to a vehicle frame;

a first motor for rotating the first telescopic arm into a plurality of positions comprised between a lower

horizontal position and a raised position of maximum inclination with respect to the lower horizontal position;

a second telescopic arm pivotedly mounted and rotatably constrained, at a second horizontal hinge axis located at an upper portion of the first telescopic arm, the second horizontal hinge axis being parallel to the first hinge axis;

a terminal load support group pivotedly mounted at a terminal end of the second telescopic arm, wherein,

the upper portion of the first telescopic arm is aligned with a longitudinal axis of the first telescopic arm; and

a second motor for rotating the second telescopic arm about the second horizontal hinge axis, wherein,

the second telescopic arm lengthens and shortens in horizontal direction to move the terminal load support group in the horizontal direction.

8. (new) An apparatus with telescopic arms, comprising:

a first telescopic arm (2) with a lower portion (2a) rotatably mounted, at a first horizontal hinge axis (3), to a mobile support base (4), the first arm forming a rotating tower pivotable at the first hinge axis;

a second telescopic arm (10) pivotedly connected to and rotatable about a second horizontal hinge axis (13) located at an end of the first arm; and

a terminal load support group (11) pivotedly connected to an end of the second arm at a third horizontal hinge axis, wherein,

the second arm extracts and retracts to elongate and shorten the second arm to move the terminal load support group.

9. (new) The apparatus of claim 8, wherein,

the second arm further comprises:

a posterior external element (15) with an attachment lug (15a) rotatably constrained to an upper portion (2b) of the first arm (2) about the second hinge axis (13), and

a front internal element (16) coupled slidably to the posterior internal element, the front internal element extracting and elongating the second arm to move the terminal load support group.

10. (new) The apparatus of claim 9, wherein,

the second arm further comprises:

a telescopic hydraulic cylinder (17) connected both to the posterior external element (15) and to the front internal element (16) enabling the front internal element to be extracted and retracted and to elongate and shorten the second arm.

11. (new) The apparatus of claim 10, wherein,
the second arm further comprises:

a hydraulic actuator (14) terminally pivotedly connected i) proximate the second horizontal hinge axis at the end of the first arm and ii) to the external posterior element.

12. (new) The apparatus of claim 11, wherein the hydraulic actuator rotates the second arm into operative positions comprised between a first extreme position, in which a longitudinal axis of the second arm is aligned with a longitudinal axis of the first arm 2, and a second extreme position, in which the longitudinal axis of the second arm is angled approximately transversally with respect to the longitudinal axis of the first arm.

13. (new) The apparatus of claim 8, wherein,
the terminal load support group comprises a fork element for engaging and supporting one of a platform and a pallet,

the fork element is rotatably engaged to the second arm about the third horizontal hinge axis, and

a motor rotates the load support group about the third hinge axis.

14. (new) The apparatus of claim 8, wherein,
the second arm extracts and retracts to elongate and
shorten the second arm to move the terminal load support group to
a lower level below any level that the first arm moves, wherein
loads are movable on the terminal load support group to a
horizontal position below a level of the mobile support base.

15. (new) The apparatus of claim 8, wherein,
the mobile support base rests on a vehicle, the vehicle
designed to rest on a horizontal rest plane, and
the second arm extracts and retracts to elongate and
shorten the second arm to move the terminal load support group to
a lower level below any level that the first arm moves, wherein
loads are movable on the terminal load support group to a
position below the rest plane.